

**IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE**

RESEARCH FRONTIERS)	
INCORPORATED,)	
)	
Plaintiff,)	
)	
v.)	Civil Action No. 13-1231-LPS
)	
E INK CORPORATION, E INK)	
HOLDINGS INC., SONY ELECTRONICS)	
INC., SONY CORPORATION, BARNES)	
& NOBLE INC.,)	
BARNESANDNOBLE.COM LLC, and)	
AMAZON.COM INC.,)	
)	
Defendants.)	
)	

REPORT AND RECOMMENDATION

In this action filed by Plaintiff Research Frontiers Inc. (“RFI” or “Plaintiff”) against Defendants E Ink Corp. and E Ink Holdings Inc. (collectively, “E Ink”), Sony Corp., Sony Electronics Inc., Barnes & Noble Inc., BarnesandNoble.com LLC and Amazon.com Inc. (collectively with E Ink, “Defendants”), Plaintiff alleges infringement of three patents—United States Patent No. 6,606,185, United States Patent No. 6,271,956 and United States Patent No. 5,463,491 (the “491 patent”). Presently before the Court is Defendants’ “Motion for Partial Summary Judgment that the Asserted Claims of U.S. Patent No. 5,463,491 are Invalid in View of Plaintiff RFI’s Own Written Admissions” (“Motion”). (D.I. 77) For the reasons set out below, the Court recommends that Defendants’ Motion be DENIED in the manner described below.

I. BACKGROUND

A. The Parties

RFI is a Delaware corporation with its principal place of business in Woodbury, New

York. (D.I. 22 at ¶ 2) Since its founding in 1965, RFI has worked exclusively on “developing suspended particle technology applicable for use in display and light control applications (‘SPD’).” (*Id.* at ¶ 3) It is the owner of the ‘491 patent. (*Id.* at ¶ 6)

E Ink Corp. is a Delaware corporation with its principal place of business in Billerica, Massachusetts. (*Id.* at ¶ 10) E Ink Corp. supplies electronic paper displays that are incorporated into eBooks, eReaders, and other display products. (*Id.* at ¶¶ 11-17) E Ink Holdings Inc. is a Taiwanese corporation with its principal place of business in Taiwan. (*Id.* at ¶ 19) It is alleged that E Ink Holdings Inc. provides further assistance in the manufacture and/or assembly of E Ink Corp.’s products in Asia. (*Id.* at ¶ 20) It is further alleged that the remaining Defendants manufacture, use, offer for sale and/or import eReader and eBook devices incorporating E Ink-manufactured components. (*Id.* at ¶¶ 27, 35, 43)

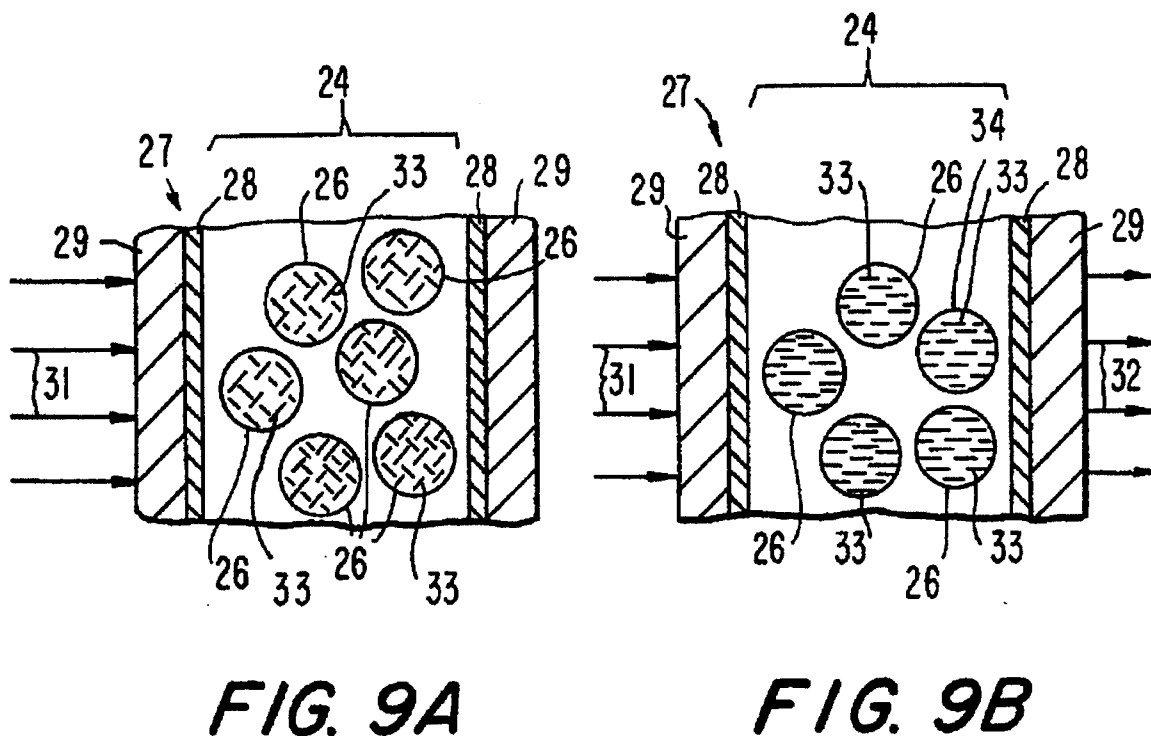
B. The ‘491 Patent

The focus of the instant Motion is the ‘491 patent, entitled “Light Valve Employing a Film Comprising an Encapsulated Liquid Suspension, and Method of Making Such Film[.]” (D.I. 22, ex. B) That patent, which was issued on October 31, 1995, contains 24 claims (four of which—claims 1, 10, 16 and 24—are independent), and 11 figures. (*Id.*)

The ‘491 patent relates in general to light valves, and more specifically, to improvements relating to incorporating within a plastic film a light valve suspension used to control light transmission in a light valve. (‘491 patent, col. 1:15-18) The ‘491 patent describes conventional light valves as a cell containing “a ‘light valve suspension[.]’ namely small particles suspended in a liquid suspending medium.” (*Id.*, col. 1:23-30) The patent claims, *inter alia*, a film suitable for use in a light valve. (*Id.*, col. 2:14-15; *see also id.*, col. 38:39-44) The film is described as

being comprised of a “cross-linked polymer matrix having droplets of a light valve suspension distributed in the matrix[.]” (*Id.*, col. 2:15-17) The particles dispersed in the liquid light valve suspension may be organic or inorganic particles and may have other characteristics (e.g., they may be light-polarizing). (*Id.*, col. 2:61-67)

Figures 9A and 9B, reproduced below, illustrate the “closed” and “open” states of one type of the film in an embodiment of the invention:



(*Id.*, col. 10:13-15) In these figures, the film (24) contains microdroplets (26) of the liquid suspension in which the particles (33) are dispersed. (*Id.*, col. 11:51-54) In Fig. 9A, the light valve is in the “closed” state, and much of the light (31) striking it is absorbed. (*Id.*, col. 11:51-58) Conversely, Fig. 9B depicts the light valve in its “open” state, so that a considerable portion

of the light (31) passes through the film as indicated by the arrows (32). (*Id.*, col. 11:58-61)

Claim 1, a key claim implicated by the current Motion, reiterates the components of the invention set out therein as follows:

1. A film suitable for use as the light-modulating unit of a light valve, comprising a cross-linked polymer matrix having droplets of a liquid light valve suspension distributed in and in direct contact with the cross-linked [polymer] matrix, said liquid light valve suspension *comprising organic particles* suspended in a liquid suspending medium.

(*Id.*, col. 38:39-44 (emphasis added))

C. Procedural Posture

RFI first brought a Complaint for patent infringement against Defendants on July 12, 2013. (D.I. 1) RFI filed an Amended Complaint on December 2, 2013. (D.I. 22)

On April 2, 2015, Defendants filed an unopposed motion for leave to file the instant Motion, (D.I. 75), which this Court subsequently granted, (D.I. 76); Defendants thereafter filed the instant Motion, (D.I. 77). The parties completed briefing on the Motion on May 18, 2015. (D.I. 91) On September 8, 2015, Chief Judge Leonard P. Stark referred the Motion to the Court for resolution. (D.I. 122) The Court heard oral argument on the Motion on November 2, 2015, in conjunction with oral argument on claim construction. (D.I. 142 (hereinafter, “Tr.”))

II. LEGAL STANDARDS

A. Summary Judgment

A grant of summary judgment is appropriate where “the movant shows that there is no genuine dispute as to any material fact and the movant is entitled to judgment as a matter of law.” Fed. R. Civ. P. 56(a). The moving party bears the burden of demonstrating the absence of a

genuine issue of material fact. *See Matsushita Elec. Indus. Co., Ltd. v. Zenith Radio Corp.*, 475 U.S. 574, 585 n.10 (1986). If the moving party meets this burden, the nonmovant must then “come forward with specific facts showing that there is a *genuine issue for trial*.” *Id.* at 587 (emphasis in original) (internal quotation marks omitted). If the nonmoving party fails to make a sufficient showing on an essential element of its case with respect to which it has the burden of proof, the moving party is entitled to judgment as a matter of law. *Celotex Corp. v. Catrett*, 477 U.S. 317, 322-23 (1986). During this process, the Court will “draw all reasonable inferences in favor of the nonmoving party, and it may not make credibility determinations or weigh the evidence.” *Reeves v. Sanderson Plumbing Prods., Inc.*, 530 U.S. 133, 150 (2000).

In order to defeat a motion for summary judgment, however, the nonmoving party must “do more than simply show that there is some metaphysical doubt as to the material facts.” *Matsushita*, 475 U.S. at 586; *see also Podobnik v. U.S. Postal Serv.*, 409 F.3d 584, 594 (3d Cir. 2005) (party opposing summary judgment “must present more than just bare assertions, conclusory allegations or suspicions to show the existence of a genuine issue”) (internal quotation marks and citation omitted). The “mere existence of *some* alleged factual dispute between the parties will not defeat an otherwise properly supported motion for summary judgment; the requirement is that there be no *genuine* issue of *material* fact.” *Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 247-48 (1986) (emphasis in original). Facts that could alter the outcome are “material,” and a factual dispute is genuine only where “the evidence is such that a reasonable jury could return a verdict for the nonmoving party.” *Id.* at 248. “If the evidence is merely colorable . . . or is not significantly probative . . . summary judgment may be granted.” *Id.* at 249-50 (internal citations omitted). A party asserting that a fact cannot be—or,

alternatively, is—genuinely disputed must support the assertion either by citing to “particular parts of materials in the record, including depositions, documents, electronically stored information, affidavits or declarations, stipulations (including those made for purposes of the motion only), admissions, interrogatory answers, or other materials”; or by “showing that the materials cited do not establish the absence or presence of a genuine dispute, or that an adverse party cannot produce admissible evidence to support the fact.” Fed. R. Civ. P. 56(c)(1)(A) & (B).

B. Anticipation

A claim is anticipated under 35 U.S.C. § 102(a) or (b) if:

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for patent, or

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of the application for patent in the United States

35 U.S.C. § 102.¹ A patent claim is anticipated if each and every limitation is found, either expressly or inherently, in a single prior art reference. *In re Gleave*, 560 F.3d 1331, 1334 (Fed. Cir. 2009); *Moba, B.V. v. Diamond Automation, Inc.*, 325 F.3d 1306, 1321-22 (Fed. Cir. 2003).

This test mirrors, to some extent, the test for infringement, and “it is axiomatic that that which would literally infringe if later anticipates if earlier.” *Bristol-Myers Squibb Co. v. Ben Venue*

¹ The Court relies here on the version of 35 U.S.C. § 102 in effect prior to passage of the Leahy-Smith America Invents Act (“AIA”); this prior version of Section 102 applies to patents, like the asserted patent here, that have an effective filing date prior to March 16, 2013. *See Solvay S.A. v. Honeywell Int’l Inc.*, 742 F.3d 998, 1000 n.1 (Fed. Cir. 2014) (noting that the “AIA amendments apply only to applications and patents with an effective filing date of March 16, 2013, or later”).

Labs., Inc., 246 F.3d 1368, 1378 (Fed. Cir. 2001).

In order to anticipate, however, a reference must, *inter alia*, enable one of skill in the art to make the invention without undue experimentation. *In re Gleave*, 560 F.3d at 1334. On that score, the United States Court of Appeals for the Federal Circuit has made clear that “a prior art reference need not enable its full disclosure; it only needs to enable the portions of its disclosure alleged to anticipate the claimed invention.” *In re Antor Media Corp.*, 689 F.3d 1282, 1290 (Fed. Cir. 2012).

With regard to the enablement-related question as to whether “undue experimentation” is required, that is ““not a single, simple factual determination, but rather . . . a conclusion reached by weighing many factual considerations.”” *Martek Biosciences Corp. v. Nutrinova, Inc.*, 579 F.3d 1363, 1378 (Fed. Cir. 2009) (quoting *In re Wands*, 858 F.2d 731, 737 (Fed. Cir. 1988)). Determining what level of experimentation qualifies as “‘undue,’ so as to render a disclosure non-enabling, is made from the viewpoint of persons experienced in the field of the invention.” *Elan Pharm., Inc. v. Mayo Found. for Med. Educ. & Research*, 346 F.3d 1051, 1055 (Fed. Cir. 2003). Among the factors that may be considered in this calculus (the “*Wands* factors”) are the state of the prior art, the amount of direction or guidance presented, the quantity of experimentation necessary and the presence or absence of working examples. *In re Wands*, 858 F.2d at 737.²

A district court “presume[s] the enablement of unclaimed (and claimed) material in a

² Other of the *Wands* factors include: the nature of the invention; the relative skill of those in the art; the predictability or unpredictability of the art; and the breadth of the claims. *In re Wands*, 858 F.2d at 737. A court need not consider every one of the *Wands* factors in its analysis to find a disclosure enabling. *See Streck, Inc. v. Research & Diagnostic Sys., Inc.*, 665 F.3d 1269, 1288 (Fed. Cir. 2012).

prior art patent [a] defendant asserts against a plaintiff.” *Amgen Inc. v. Hoechst Marion Roussel, Inc.*, 314 F.3d 1313, 1355 (Fed. Cir. 2003). In challenging the presumption of enablement, the patentee “may argue that the relevant claimed or unclaimed disclosures of a prior art patent are not enabled and therefore are not pertinent prior art.” *Id.* Ultimately, it is the patentee who bears the “burden of proving the nonenablement of [the prior art patent] before the district court.” *Id.* If “a patentee presents evidence of nonenablement that a trial court finds persuasive, the trial court must then exclude that particular prior art patent in any anticipation inquiry, for then the presumption has been overcome.” *Id.* The patentee’s burden is to overcome the presumption of nonenablement by a preponderance of the evidence. *See Amgen Inc. v. Hoechst Marion Roussel, Inc.*, 457 F.3d 1293, 1307 (Fed. Cir. 2006) (“On remand, the district court found that Amgen had met its burden of proving by a preponderance of the evidence that the Sugimoto patent was not enabled.”); *Cubist Pharm., Inc. v. Hospira, Inc.*, 75 F. Supp. 3d 641, 661 (D. Del. 2014) (“The patentee, however, bears the burden of overcoming the presumption of prior art enablement by a preponderance of the evidence.”) (citing *Amgen*, 314 F.3d at 1355-56).³

Ultimately, when presented with a motion for summary judgment on the ground that a prior art reference anticipates a patent’s claims, a court may deny the motion if, for example, there are “[d]isputed material issues of fact concerning how one of ordinary skill in the art would understand disclosure of a particular technology[.]” *Robocast, Inc. v. Apple, Inc.*, 39 F. Supp. 3d 552, 564 (D. Del. 2014); *see also OSRAM Sylvania, Inc. v. Am. Induction Techs., Inc.*, 701 F.3d

³ *But see Robocast, Inc. v. Apple, Inc.*, 39 F. Supp. 3d 552, 566 (D. Del. 2014) (tentatively concluding that the effect of the presumption of enablement is to indicate that “even if the patentee is required to present some evidence of nonenablement, the burden still rests on the party asserting invalidity to ultimately demonstrate by clear and convincing evidence that the prior art is enabled”) (quoting *Forest Labs., Inc. v. Ivax Pharm., Inc.*, 438 F. Supp. 2d 479, 487 n.3 (D. Del. 2006)).

698, 706 (Fed. Cir. 2012).

III. DISCUSSION

In this Motion, Defendants move for partial summary judgment on the ground that the asserted claims of the '491 patent are invalid. (D.I. 77) To that end, Defendants assert that a single prior art reference, United States Patent No. 4,919,521, (D.I. 79, ex. E (hereinafter, "Tada")), anticipates the '491 patent, (D.I. 78 at 3). Relatedly, Defendants argue that RFI's own statements regarding Tada,⁴ which appear in one of RFI's own European patents, prevent RFI from raising a genuine issue of material fact regarding anticipation of the '491 patent. (*Id.* at 6)

A. The European Patent

Before addressing the substance of Defendants' Motion, it is helpful to summarize the chronology of events leading to the issuance of the RFI European patent referenced above. This patent was European Patent No. 0 615 629 (the "EP '629 patent" or the "European patent"), (D.I. 79, ex. A), which claims priority to the same application underlying the '491 patent, (D.I. 78 at 5). Claim 1 in the EP '629 patent application read as follows:

1. A film suitable for use as the light-modulating unit of a light valve, comprising a cross-linked polymer matrix having droplets of a liquid light valve suspension distributed in the cross-linked polymer matrix, the liquid light valve suspension comprising particles suspended in a liquid suspending medium, wherein that said particles are organic particles, and said droplets are in direct contact with the cross-linked polymer matrix.

(D.I. 90 at A0119; *see also* D.I. 87 at ¶ 7) This wording was thus very similar to the wording of claim 1 of the '491 patent, which had previously been issued in 1995.

⁴ There is no dispute here that Tada, which issued on April 24, 1990, more than one year prior to the earliest priority date claimed by the '491 patent, qualifies as prior art under 35 U.S.C. § 102(b). (D.I. 78 at 8 n.7)

In September 1997, during prosecution of the EP '629 patent, the European examiner rejected certain claims over Tada,⁵ explaining that the “common concept” of the EP '629 patent’s claims was “not novel[.]” (D.I. 90 at A0113; *see also* D.I. 87 at ¶ 6) The European examiner described this “common concept” as:

[A] film suitable for [use] as the light-modulating unit of a light valve, comprising a polymer matrix having droplets of a liquid light valve suspension distributed in the polymer matrix, said liquid light valve suspension comprising particles suspended in a liquid suspending medium.

(D.I. 90 at A0113) The European examiner further asserted that Tada also implicitly disclosed certain limitations that were recited in claim 1 and other claims of the EP '629 patent application, such as the use of a “cross-linked polymer matrix” and (importantly here) the use of organic particles. (*Id.* at A0115) In light of this, the European examiner reiterated that claim 1 and other claims of the EP '629 patent application could not be regarded as novel. (*Id.*)

On March 4, 1998, in response to this rejection, RFI’s patent attorney, Gérard Bloch, asserted on RFI’s behalf that Tada did not “destroy[] the inventive features of the claims.” (*Id.* at A0117) More specifically, Mr. Bloch made a nonenablement argument—asserting that “Tada does not contain any teaching on how to *make the claimed film containing organic particles*[.]” (D.I. 87 at ¶ 7 (emphasis added); *see also* D.I. 90 at A0117-18) Mr. Bloch explained that although Tada disclosed the use of inorganic particles, and also stated that “organic particles could be substituted for the inorganic particles[.]” Tada did not disclose “how this can be done.” (D.I. 87 at ¶ 7; *see also* D.I. 90 at A0118) He also asserted that Tada did not address the problem

⁵ The prosecution history of the EP '629 patent refers to Tada as “E1[.]” (D.I. 90 at A0113; *see also* D.I. 87 at ¶ 6)

of how to prevent organic particles from being destroyed during the formation of the film. (D.I. 90 at A0118) Such a teaching was necessary, Mr. Bloch explained, because it is “crucial” that the oligomer or polymer be compatible with the particle-containing liquid light valve suspension, such that the organic particles “retain their identity.” (*Id.* at A0117)

The European examiner, in a response dated August 16, 1999, did not agree with Mr. Bloch’s argument. First, the European examiner acknowledged what was not in dispute—that Tada disclosed “a light modulating film comprising a polymer matrix having droplets of a suspension in which the usually included inorganic [particles] may be replaced by organic particles[.]” (*Id.* at A0124) From there, the European examiner stated an inability to “follow [RFI’s] argumentation” that Tada “does not give sufficient information on how to combine the organic particle suspension and the polymeric matrix without destroying the particles.” (*Id.*) “Irrespective of whether the organic particles are difficult to handle or not in the liquid light valve suspension[.]” the European examiner wrote (noting that there was “no hint toward such problems in” Tada), Tada “unambiguously discloses such organic particles[.]” such that it “anticipates the subject matter of present claim 1.” (*Id.* at A0124-25) The European examiner further stated that even if “a problem exists in [Tada] when using organic particles” and even if RFI’s application solved that problem, claim 1 of the application also “fail[ed] to clearly specify the means responsible for such solution.” (*Id.* at A0125)

The process then repeated, with Mr. Bloch again asserting that Tada did not anticipate claim 1 because Tada did not “enable the organic particle based claims . . . since organic particles cannot simply be substituted for inorganic particles[.]” (D.I. 87 at ¶ 9), due to “solubility differences between organic and inorganic materials[.]” (D.I. 90 at A0126; *see also* D.I. 87 at ¶

9). Again, the European examiner disagreed, pointing to Tada's explicit and implicit disclosures of the relevant limitations of claim 1 of the EP '629 patent application. (D.I. 90 at A0131-32) The European examiner also specifically noted that both the pending application and Tada disclosed the same types of organic particles as being suitable for the claimed inventions. (*Id.* at A0132)

In RFI's subsequent response, Mr. Bloch took a different approach, now seeking to amend the proposed claims. The European examiner had previously found, *inter alia*, that proposed claim 9 (which included a limitation that the polymer matrix element in the claimed subject matter be formed of polyorganosiloxane) was novel and allowable. (*Id.* at A0134) In light of this, Mr. Bloch now proposed that RFI would amend its application, such that new claim 1 would be limited to the subject matter of prior claim 9 (and proposing a number of other claims that would be dependent on this new claim 1). (D.I. 86 at 4; D.I. 87 at ¶ 11; D.I. 90 at A0134-35)

This approach led to the issuance of the EP '629 patent. As part of the process leading to the patent's issuance, RFI's counsel drafted a statement regarding Tada for inclusion in the patent. (D.I. 79, ex. F at EINK_00003849) That statement, which Defendants now refer to as the "Tada admission[,]" (D.I. 78 at 6), reads as follows:

As prior art US-A-4 919 521 [Tada] is known which explicitly discloses a film suitable for use as the light-modulating unit of a light valve comprising a polymer matrix having distributed therein and in direct contact therewith, droplets of a liquid light valve suspension, the liquid light valve suspension comprising organic particles suspended in a liquid suspended medium, the polymer matrix being formed from a mixture of a[n] oligomer or a polymer and the liquid light valve suspension containing the organic particles.

(D.I. 79, ex. F at EINK_00003849) After the European examiner gave RFI the ability to review

and approve the final text of the EP '629 patent, which included the Tada admission, (*id.* at EINK_00003780-81), and RFI approved that text with one minor change, (*id.* at EINK_00003777), the European Patent Office (“EPO”) then issued the EP '629 patent. The “Background” section of the EP '629 patent includes the Tada admission. (EP '629 patent, at 2:40-44)⁶

With this background in mind, the Court now turns to Defendants’ arguments in support of the Motion.

B. The “Tada Admission”

Defendants first assert that the substance of the Tada admission precludes RFI from demonstrating that a genuine issue of material fact exists regarding anticipation as to the asserted claims (claims 1, 3, 5, 9) of the '491 patent. (D.I. 78 at 6-10; '491 patent, cols. 38:39-39:4) In support, Defendants assert that the Tada admission amounts to a clear concession that Tada

⁶ The issue of Tada and its anticipatory effect also arose during prosecution of the '491 patent. (D.I. 78 at 4-5; D.I. 86 at 3) During that process, the applicant filed an “Information Disclosure Statement” with the United States Patent and Trademark Office (“USPTO”) that called out Tada. (D.I. 79, ex. B at RF000090-92) The USPTO examiner thereafter rejected multiple proposed claims (including what became claim 1 of the '491 patent) as being anticipated by Tada, concluding that Tada disclosed the use of particles that may be organic compounds. (*Id.* at RF000123-24) In response, RFI asserted that Tada did not anticipate the subject matter of claim 1 because it was not an enabling disclosure. (*Id.* at RF000185-86) On that score, RFI stated that Tada “fails to disclose or suggest how to form a film containing droplets of a liquid light valve suspension that includes organic particles.” (*Id.* at RF000185 (emphasis in original)) More specifically, RFI asserted that if organic particles were substituted for the inorganic particles otherwise discussed in Tada, the organic particles would be dissolved in “liquid organic monomers” that surround the suspension, and “hence no light valve suspension would be formed because there would be no suspended particles.” (*Id.* at RF000186) RFI thus claimed that Tada does “not address how to prevent organic particles from being destroyed during the formation of the film.” (*Id.*) In other words, RFI was here making a similar argument to the USPTO as to Tada’s nonenablement as Mr. Bloch would make on its behalf to the EPO. After this back and forth with the USPTO examiner, prosecution “moved on to other matters,” and the USPTO ultimately issued the '491 patent without further discussion of Tada. (D.I. 78 at 5)

“‘explicitly discloses’ every limitation of claim 1 of the ‘491 patent.” (D.I. 78 at 1; *see also* D.I. 91 at 3) Noting that “[a] statement in a patent that something is in the prior art is binding on the applicant and patentee for determinations of anticipation[,]” *Constant v. Advanced Micro-Devices, Inc.*, 848 F.2d 1560, 1570 (Fed. Cir. 1988), Defendants say that so too is an admission that a prior art reference is enabled. (D.I. 79 at 6-7); *cf. Apple Inc. v. Motorola, Inc.*, 757 F.3d 1286, 1313 (Fed. Cir. 2014) (holding a party to an admission it made to the Japanese Patent Office, for purposes of a decision on claim construction, where the import of the statement “could not be clearer”), *overruled on other grounds by Williamson v. Citrix Online, LLC*, 792 F.3d 1339, 1349 (Fed. Cir. 2015). And they claim that the content of the Tada admission in fact amounts to an admission that the reference is enabling, such that with it, RFI “forfeit[ed any] non-enablement argument.” (D.I. 91 at 3)

RFI, for its part, “does not contest that Tada discloses various elements of claim 1 of the ‘491 patent.” (D.I. 86 at 12; *see also id.* at 1-2) Rather, it states that the Tada admission was not a concession that Tada was anticipatory, because RFI “never stated or represented that Tada was enabling[.]” (D.I. 86 at 13; *see also* Tr. at 127) Instead, RFI notes that its counsel, Mr. Bloch, expressly took the position during prosecution of the EP ‘629 patent that Tada was not enabling, and asserts that RFI never wavered thereafter as to that position. (D.I. 86 at 13 (citing D.I. 87 at ¶¶ 7, 9)) In support, it puts forward a declaration from Mr. Bloch, who says the same. (D.I. 87) Mr. Bloch notes that the Tada admission was not a statement that Tada was enabling, but instead was only “a statement as to what Tada simply says on its face.” (*Id.* at ¶¶ 12-13)

The key issue, then, is whether the Tada admission amounts to a clear concession by RFI

that Tada is enabling.⁷ Here, the Court acknowledges that Defendants' argument has some initial force. The Tada admission, after all, does contain unqualified language about what Tada "explicitly discloses," including that it discloses a "film *suitable for use* as the light-modulating unit of a light valve" that includes a liquid light valve suspension "comprising *organic particles* suspended in a liquid suspended medium[.]" (EP '629 patent, at 2:40-44 (emphasis added); *see also* D.I. 78 at 8; D.I. 91 at 3) At first blush (as Defendants argue) this might sound a lot like an admission that such a film would be workable and usable. (D.I. 91 at 3)

Ultimately, however, the Court cannot agree with Defendants' position. For the following reasons, it concludes that the Tada admission does not amount to a clear concession that Tada was enabled as to a film utilizing organic particles.

For one thing, even were the Court considering the words of the Tada admission in a vacuum, those words are not as explicit as they might be. That is, RFI did not state that "the Tada reference is enabling," nor use similar, impossible-to-mistake language. (Tr. at 132; D.I. 86

⁷ In its briefing, RFI also put forward an additional argument: that the Tada admission was included simply "as a matter of European practice, and on the understanding that the European examiner required the specification to be amended to reflect the 'disclosure' of Tada." (D.I. 86 at 12 (citing D.I. 87 at ¶ 13)) Citing to case law from the Federal Circuit, RFI argues that the statement's inclusion was related to a "nuance of European patent practice, [such that] it should not be considered in determining whether Tada is anticipatory prior art." (*Id.* (citing cases)); *see, e.g. Heidelberger Druckmaschinen AG v. Hantscho Commercial Prods., Inc.*, 21 F.3d 1068, 1072 n.2 (Fed. Cir. 1994) (noting that courts should use "[c]aution" in applying the action of a foreign patent examiner to deciding whether the requirements of 35 U.S.C. § 103 are met under United States law, in light of the fact that "the theories and laws of patentability vary from country to country"). At oral argument, however, RFI's counsel clarified that this was not its primary argument—that its primary position is that RFI did not, in fact, admit during the prosecution of the EP '629 patent that Tada was enabled as to the utilization of organic particles in a film. (Tr. at 134-36) In light of this, and in light of the nature of the Court's ultimate recommendation here, the Court need not determine whether RFI's statement should otherwise be disregarded because it was made pursuant to a "nuance" of European patent law.

at 13) While Defendants suggest that RFI's use of the phrase a "film suitable for use" amounts to a blatant admission regarding enablement, (D.I. 91 at 1), upon closer review, that is less than clear. It is notable, for example, that RFI used this same phraseology in claim 1 of the EP '629 patent, wherein it claimed a "film suitable for use" as a light-modulating unit of a light valve, with particular components. (EP '629 patent, at 13:50) And so it could be, as RFI suggests, (Tr. at 132), that the patentee's use of this phrase in referring to what Tada disclosed was simply a way to emphasize that Tada and the EP '629 patent mirrored each other in their description of certain required elements of the films at issue—i.e., that it was not a statement admitting that Tada "teaches you how to make [such a] film [using organic particles.]" *Cf. Reading & Bates Const. Co. v. Baker Energy Res. Corp.*, 748 F.2d 645, 651 (Fed. Cir. 1984) ("While the prosecuting attorney admitted that the Smith brochure advertising *the process* set forth in the '903 patent is prior art, that is not the equivalent of an admission that the Smith brochure constitutes an enabling disclosure of the invention claimed in the '903 patent.") (emphasis in original); *Gen. Elec. Co. v. Hoechst Celanese Corp.*, 740 F. Supp. 305, 315 (D. Del. 1990) (concluding that a patentee's current denial that a prior art patent enabled a person of skill in the art at the relevant time to achieve an unreacted blend of two particular polymers was not persuasive, but only where the patentee had previously made clear representations to a patent examiner, including that, at the relevant time, "*one skilled in the art had the tools available to produce [the requisite] blend or a copolymer*") (emphasis in original).

Moreover, here we are *not* considering the words of the Tada admission in a vacuum. The Court must also consider the well-developed record of the prosecution of the EP '629 patent, which provides additional context as to what RFI's statement does or does not mean. During that

prosecution, RFI's counsel, Mr. Bloch, repeatedly argued to the European examiner that Tada did not address the problem of how to use organic particles in a film of this type, without having such particles be destroyed during the formation of the film. And because RFI thereafter added the limitation relating to polyorganosioxane in its revised claims (which ultimately issued in the EP '629 patent), it was not required to concede to the European examiner that Tada was enabling in order to get the patent issued. (Tr. at 133; *see also* D.I. 86 at 4) To conclude that RFI nevertheless *did* include such a concession in the patent's specification—despite having held firm to a contrary position for years in the EPO—seems counterintuitive.

For these reasons, the fact of the Tada admission alone does not warrant summary judgment in Defendants' favor.

C. Tada and Enablement

The Court next assesses the remainder of the evidence before it, in order to determine whether there is a genuine issue of material fact precluding summary judgment on the question of anticipation. Here this reduces to an inquiry as to whether Tada, in fact, teaches persons of ordinary skill how to “make the film that is the subject matter of claim 1 of the '491 patent” (that is, to make the requisite film utilizing organic particles), thereby anticipating the subject matter of the patent. (D.I. 86 at 1-2)⁸ With the presumption that Tada is enabled as the starting point, the Court turns first to assess the evidence that RFI puts forward to suggest otherwise.

⁸ Although the Court references claim 1 here, Defendants further contend that Tada also anticipates the subject matter of the remaining asserted claims from the '491 patent (claims 3, 5 and 9), which are all dependent on claim 1. (D.I. 78 at 1) The parties' arguments as to anticipation regarding those claims are no different than those as to claim 1; the arguments as to all of the claims focus on whether Tada was enabling as to its reference to the use of organic particles. That is, RFI and Defendants do not argue about some unique aspect of these three additional claims when setting out their positions on enablement. (D.I. 78 at 3; Tr. at 111)

RFI begins by noting that claim 1 of the '491 patent recites a film that comprises: (1) a *polymer matrix*, which is in direct contact with droplets of a liquid light valve suspension; (2) with said liquid light valve suspension comprising *organic particles*; that (3) are suspended in a *liquid suspending medium*. (D.I. 86 at 7) RFI contends, however, that Tada provides no “guidance on the nature of the materials that could be used to prepare a film that specifically comprises organic particles[.]” (D.I. 86 at 8) Here, RFI relies heavily on the declaration of its expert, Dr. Johnathan Brownlee. (D.I. 88)

Dr. Brownlee, *inter alia*, begins his argument by setting out the following basic propositions:

- (1) In order to make the film of claim 1, one of ordinary skill in the art would have had to choose organic particles that could actually work as part of a light-modulating unit of a light valve (that is, particles that could be capable of reflecting, absorbing and/or transmitting desired wavelengths of visible light, and that could react upon the application of an electric field, resulting in an optical effect).;
- (2) These organic particles must also be compatible with the liquids that suspend them (such that the suspending liquid does not dissolve the particles or alter their desired state, and that the particles can actually remain suspended in the suspending liquid).;
- (3) The suspending liquid and the polymer matrix surrounding it must be compatible (such that the suspending liquid does not dissolve the polymer matrix and that the particles remain in the suspending liquid).; and
- (4) Depending on the nature of the materials chosen for the organic particles, the liquid suspension medium and the polymer matrix, it may be necessary to use other materials in order to prepare a functional film (such as stabilizers to keep the particles dispersed and cross-linking agents to promote the cross-linking of the polymer matrix).

(D.I. 88 at ¶¶ 24-29; *see also* D.I. 86 at 7-8) However, Dr. Brownlee opines that without “guidance on the nature of the materials that could be used to prepare a film that specifically comprises organic particles,” a person of ordinary skill in the art would have to rely on trial and error, combining different materials to test for compatibility and functionality, in order to make the film claimed in claim 1. (D.I. 88 at ¶ 31; *see also* D.I. 86 at 8-9)

From there, Dr. Brownlee asserts that Tada “contains no examples of how to make a film using organic particles[.]” (D.I. 88 at ¶ 35) And ultimately, he concludes that, based on the Tada reference, “one of ordinary skill in the art would not be able to make and use the film disclosed in claim [1] of the '491 patent without undue experimentation.” (*Id.* at ¶ 36)⁹

In the course of explaining the reasons for this conclusion, Dr. Brownlee acknowledges that Tada does list five examples of ““organic compounds particles[.]”” which Tada asserts can be used as suspended particles in a light valve film: “haloalkaloid acid salt represented by [herapathite] (iodoquinine sulfate), deflection metal halide, deflection metal perhalide, nafoxidine hydrochloride and guanine[.]” (Tada, col. 4:5-8; *see also* D.I. 88 at ¶ 16) But as to each of these exemplary organic particles, Dr. Brownlee explains why that particle’s characteristics would frustrate its use in a working film, and/or why Tada does not provide enough information as to how to use such a particle in order to make a working film.

For example, as to Tada’s reference to “deflection metal halide” and “deflection metal

⁹ Dr. Brownlee notes, in contrast, that the '491 patent provides “specific detailed examples” of the preparation of films containing organic particles, which specify not only the exact materials that must be used, but also the properties of those materials and “film forming reaction conditions[.]” (D.I. 88 at ¶ 35 (citing '491 patent, cols. 12:63-38:17)) He contrasts the listing of these “complex” reactions and combinations with Tada’s “simple recitation to use ‘organic particles’” in the requisite film. (*Id.*)

perhalide[.]” Dr. Brownlee asserts that the terms have no meaning to a person of ordinary skill in the art, and that, at a minimum, they would not be understood to refer to organic particles.¹⁰ (D.I. 88 at ¶¶ 17-18; D.I. 86 at 9-10) He suggests that even were these references meant to implicate an “organometal halide” and an “organometal perhalide[.]” Tada lacks any accompanying guidance on which specific classes of such particles could be used in a working film, and as to what other key components (e.g., what suspending fluid or polymer matrix material) should be used therein. (D.I. 88 at ¶¶ 17-18; D.I. 86 at 9-10)

As to a third organic particle referenced in Tada, nafoxidine hydrochloride, Dr. Brownlee states that it is “known to break down when exposed to [ultraviolet] light” in certain relevant circumstances and “to form clumps in a ‘brick wall’ type structure when suspended in a liquid.” (D.I. 88 at ¶ 19; *see also* D.I. 86 at 10) For these reasons, he posits that it would be unusable in a functioning light valve film. (D.I. 88 at ¶ 19; *see also* D.I. 86 at 10)

As to a fourth example, guanine, Dr. Brownlee states that it has known characteristics (e.g., that it is soluble in oils and degrades on prolonged contact with light) that would make it a poor choice for use in a film described in claim 1. (D.I. 88 at ¶ 20; *see also* D.I. 86 at 10) He also points to an experiment by RFI’s Vice President of Technology, Steven Slovak, in which Mr. Slovak used the instructions from Example 1 of Tada to prepare a film (substituting guanine particles for the inorganic mica particles used in that example). (D.I. 88 at ¶ 20; *see also* D.I. 86 at 10-11; D.I. 89 at ¶ 8) Mr. Slovak concluded that the experiment resulted in a “film [that] did not function” because he observed no change in visible transmittance of the cell between

¹⁰ Defendants assert, and RFI does not seem to dispute, that the word “deflection” that comes before “metal halide” and “metal perhalide” is the product of an imperfect translation, and instead should read “polarizing.” (D.I. 91 at 8 n.7)

powered and unpowered states. (D.I. 89 at ¶ 8)

Lastly, as to the fifth example, herapathite, Dr. Brownlee states that its “structure, function, and behavior” had been unclear for over a century at the time Tada was filed. (D.I. 88 at ¶ 21) He also notes that Mr. Slovak was unable to prepare a working film using herapathite in accordance with Example 1 of Tada, because “the particles agglomerated into a jelly-like mass at the bottom of the vial.” (*Id.*; *see also* D.I. 89 at ¶ 9)

Defendants, for their part, challenge RFI’s (and Dr. Brownlee’s) conclusions. They begin by noting that “[t]o avoid summary judgment RFI must present persuasive evidence . . . that Tada is not enabled with respect to any of the organic particles that Tada discusses.” (D.I. 91 at 6 (emphasis in original)); *see also In re Morsa*, 803 F.3d 1374, 1377 (Fed. Cir. 2015) (“For a prior-art reference to be enabling, it need not enable the claim in its entirety, but instead the reference need only enable a single embodiment of the claim.”); *Schering Corp. v. Geneva Pharm.*, 339 F.3d 1373, 1381 (Fed. Cir. 2003) (“An anticipatory reference need only enable subject matter that falls within the scope of the claims at issue, nothing more.”). From there, they push back against RFI’s contentions regarding four of the five exemplary particles (all but nafoxidine hydrochloride). (D.I. 91 at 6-9)

With respect to “metal halides” and “metal perhalides,” for example, Defendants suggest that (contrary to Dr. Brownlee’s statement) these terms would clearly be understood to refer to organometal (i.e., organic) halides. (D.I. 91 at 8) They state that although RFI faults Tada for lacking specificity as to the identification of *particular* organometal halides, liquid suspending media and matrix materials, the ‘491 patent itself uses similarly-worded disclosures to those in Tada. (*Id.* at 9) Noting that RFI does not assert that the ‘491 patent’s claims are not enabled to

their full scope, Defendants argue that Tada's similar references to the use of these components must also similarly be enabling. (*Id.*) Moving next to guanine, Defendants contend that Mr. Slovak's experiment was actually successful, in that it resulted in a "film containing droplets of guanine in silicone oil." (*Id.* at 8) They argue that Mr. Slovak's contrary conclusion (that his experiment was unsuccessful because he did not observe changes in the transmittance of visible wavelengths) was faulty, since guanine is "transparent in optical and/or thermal wavelengths[.]" and Mr. Slovak failed to "test the guanine film in other parts of the spectrum such as ultraviolet light." (*Id.* (citing D.I. 88 at ¶ 20)) Lastly, as to herapathite, Defendants also allege a mistake in Mr. Slovak's experiment: that RFI failed to employ a known technique to avoid agglomeration—a technique described in one of RFI's own patents (U.S. Patent No. 4,131,334, or the "334 patent") that was in turn cited by name in Tada. (*Id.* at 7)¹¹

Taken together, RFI and Defendants have presented dueling arguments here that readily implicate at least four of the *Wands* factors: the state of the prior art, the amount of direction or guidance present, the quantity of experimentation necessary and the presence or absence of working examples. After reviewing these arguments, the Court concludes that RFI has made a sufficient showing that there are genuine disputes of material fact, which preclude grant of

¹¹ Defendants also note that Tada states that "as a result of vigorous investigating, [Tada's inventors] have found out that . . . organometal[s] . . . were particularly useful." (D.I. 91 at 9; *see also* Tada, col. 4:22-23) Defendants contend that RFI's failure to address these "particularly useful" particles, referenced in two lines of Tada, is an independent reason for granting their Motion. (D.I. 91 at 9) The Court simply does not have enough information before it to address this particular argument as to why summary judgment is warranted. The import of Tada's brief reference to such "organometal[s]" was not first mentioned in the briefing until Defendants' reply brief, and then was only discussed in four lines at the end of the brief. Instead of recommending that the District Court either grant or deny summary judgment on such a thin record, the Court instead will recommend that as to this particular enablement issue, the parties be permitted to re-address it at the time of case dispositive motion briefing.

Defendants' Motion. The Court so concludes for two primary reasons.

The first is the nature of the arguments that RFI puts forward. Those arguments are supported at each step by evidence, in the form of, *inter alia*, Dr. Brownlee's expert declaration. And those arguments appear, at least at this pre-trial stage, to be cogent ones. For example, while both the '491 patent and Tada do reference certain organic particles that might be used in the films referred to therein, it does seem, as Dr. Brownlee notes, that only the '491 patent provides very detailed descriptions (via its examples) of the exact materials that may be used or synthesized to make such films, and as to "the properties of those materials, such as the molecular weight of the polymers, precise formulae of representative organic particles, reagents, temperatures, pressures, and the film forming reaction conditions including how cross-linking and required emulsification can be combined as the film is created." (D.I. 88 at ¶ 35; *see also* D.I. 86 at 8) Tada, in contrast, does not provide any example of a film or of the preparation of a film in which organic particles operate as the light-modulating particles. (D.I. 88 at ¶¶ 15, 22; *see also* D.I. 86 at 8-9) It thus seems that if Dr. Brownlee is correct that it is "difficult to develop" the claimed films using any particular organic particle, (D.I. 88 at ¶ 35), then the limited nature of the Tada's teaching as to *how* to do so could be problematic from an enablement perspective. *Cf. Auto. Techs. Int'l, Inc. v. BMW of N.A., Inc.*, 501 F.3d 1274, 1284 (Fed. Cir. 2007) ("[W]hen there is no disclosure of any specific starting material or of any of the conditions under which a process can be carried out, undue experimentation is required.") (citation omitted).

Second, the Court is given pause at the prospect of granting Defendants' Motion, in significant part because their positions as to enablement are supported by *no* proffered expert

testimony. Instead, they consist of arguments made by Defendants' attorneys (albeit arguments that cite case law or to portions of the record). (Tr. at 128) With subject matter as complex as that at issue here, it is difficult for the Court, at the summary judgment stage, to recommend that the stated opinion of an expert (that the reference is nonenabling) be overridden based on the argument of a lawyer (who concludes otherwise).¹² *Cf. Lambda Optical Sols. LLC v. Alcatel Lucent USA Inc.*, Civil Action No. 10-487-RGA, 2015 WL 5734427, at *3 (D. Del. Sept. 30, 2015).

The impact of this imbalance in expert testimony can be seen, by way of representative example, in examining Defendants' (not insubstantial) argument as to why Tada's disclosure of herapathite is enabling. Here, the core of that argument relates to Tada's reference to the '334 patent. As noted above, Defendants assert that if only Mr. Slovak had reviewed the '334 patent's explanation of "how to suspend herapathite in an appropriate solvent[.]" he would have avoided the agglomeration of particles that doomed his experiment. (D.I. 91 at 7 (citing '334 patent, col. 2:26-35)) But a review of the '334 patent shows that the primary focus of the cited portion of its specification seems to be on avoiding the "deterioration" of particles (including herapathite particles), not avoiding agglomeration of particles. ('334 patent, col. 2:26-35) It is true that this part of the specification does also reference suspending herapathite particles "in isopentyl acetate liquid or other similar liquid esters, together with the polymer nitrocellulose which is used to help keep the particles suspended in the manner of the prior art[.]" (*id.*), and that in another portion of the '334 patent, the patentee discusses the use of polymers to help prevent

¹² Particularly as to a patent issued by the USPTO after the patentee provided the USPTO with an (apparently sufficient) explanation as to why Tada was nonenabling, and therefore, did not anticipate. *See supra* n.6.

agglomeration, (*id.*, col. 1:38-45). But would a person of skill in the art have concluded that these references are sufficient to show how to make a working film employing herapathite particles? Defendants do not have an expert to say so. And what would Dr. Brownlee say about these cited portions of the '334 patent (and why they do, or do not, have the force that Defendants ascribe to them)? The Court does not know, since Defendants' argument on this point was made in their reply brief. Uncertainty on factual matters like these cautions against the grant of summary judgment. *Cf. Johnson & Johnson Vision Care, Inc. v. CIBA Vision Corp.*, 648 F. Supp. 2d 1294, 1364 n.90 (M.D. Fla. 2009) ("Based on J & J's experience re-creating the '327 Chang Example 3 lens, and the expert testimony that Chang does not provide specific guidance or direction, the Court determines that excessive experimentation would have been necessary to practice the invention.").¹³

For these reasons, RFI has demonstrated that the record presents "at least, genuine issues of material fact concerning whether Tada enables the subject matter of the asserted claims of the '491 [p]atent." (D.I. 86 at 6); *see Robocast, Inc.*, 39 F. Supp. 3d at 565 ("Robocast does more, however, than set forth argument. Dr. Almeroth and Dr. Zellweger have both opined that the Zellweger reference is not enabling. This makes the enablement of this reference a disputed factual issue."); *cf. Cubist Pharm., Inc.*, 75 F. Supp. 3d at 661-62 (finding that the patentee had rebutted the enablement presumption with respect to anticipation, where the patent "provided a

¹³ Similar factual uncertainty exists as to whether Mr. Slovak's experiment utilizing guanine—an organic particle that, according to Dr. Brownlee, is notably ill-suited for use in a light valve film, (D.I. 88 at ¶ 20)—was flawed due to a failure to test the film in, for example, ultraviolet light, (D.I. 91 at 8). And as to Tada's alleged enablement of films using "metal halide[s]" and "metal perhalide[s]," a genuine fact issue exists as to, among other things, whether these two terms were even meant to refer to organic materials at all. (*See* D.I. 86 at 9-10 ("[T]he '491 patent does not state that metal halides are organic particles."); D.I. 88 at ¶ 18; D.I. 91 at 8)

broad range of possibilities” for a “major variable[]”—dosage level—with no indication that one possibility would have been preferable over another, such that undue experimentation would have been needed to obtain a drug’s desired effect on skeletal muscle toxicity); *Takeda Pharm. Co., Ltd v. Handa Pharm., LLC*, Case No. C-11-00840 JCS, 2013 WL 9853725, at *72 (N.D. Cal. Oct. 17, 2013) (concluding that assertions regarding, *inter alia*, the lack of direction, guidance or working examples in the prior patent’s specification and references therein would lead to the need for undue experimentation, such that the patent was not enabling for purposes of anticipation); *Forest Labs., Inc. v. Ivax Pharm., Inc.*, 438 F. Supp. 2d 479, 488-89 (D. Del. 2006) (concluding that a prior patent was not enabling where the plaintiff put forth evidence that, *inter alia*, indicated a “lack of specific guidance or working examples of the separation of citalopram in the prior art using any method”). The Court cannot conclude that RFI’s presentation would not amount “persuasive” evidence as to Tada’s nonenablement. *Amgen Inc.*, 314 F.3d at 1355.

IV. CONCLUSION

For the reasons set out above, the Court recommends that Defendants’ Motion be DENIED, in all respects, except with regard to the issue relating to Tada’s reference to “organometal[s]”; as to that latter issue, the Court recommends that the parties be permitted to address it at the time of case dispositive motion briefing.

This Report and Recommendation is filed pursuant to 28 U.S.C. § 636(b)(1)(B), Fed. R. Civ. P. 72(b)(1), and D. Del. LR 72.1. The parties may serve and file specific written objections within fourteen (14) days after being served with a copy of this Report and Recommendation. Fed. R. Civ. P. 72(b). The failure of a party to object to legal conclusions may result in the loss of the right to de novo review in the district court. *See Henderson v. Carlson*, 812 F.2d 874, 878-

79 (3d Cir. 1987); *Sincavage v. Barnhart*, 171 F. App'x 924, 925 n.1 (3d Cir. 2006).

The parties are directed to the Court's Standing Order for Objections Filed Under Fed. R. Civ. P. 72, dated October 9, 2013, a copy of which is available on the District Court's website, located at <http://www.ded.uscourts.gov>.

Dated: March 31, 2016

Handwritten signature of Christopher J. Burke in cursive script.

Christopher J. Burke
UNITED STATES MAGISTRATE JUDGE